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The Impact of the COVID-19 Pandemic on the Mental Health of Dentists

Andrea Vergara-Buenaventura and Carmen Castro-Ruiz

Abstract

Since March 2020, the COVID-19 disease has declared a pandemic producing a worldwide containment. For months, many people were subjected to strict social isolation away from family and loved ones to prevent disease transmission, leading to anxiety, fear, and depression. On the other hand, many had to close down their businesses and stop working, resulting in financial issues. Previous studies have reported that pandemics, epidemics, and some diseases can lead to mental disorders such as fear, anxiety, stress, and depression. Among those most affected, healthcare workers (HCWs), especially those on the front line, often develop mental health problems. Although there is data available on the management and care of HCWs, little attention has been paid to the mental health and well-being of dentists during the COVID-19 pandemic. Therefore, this chapter aims to review the impact of the COVID-19 pandemic on dentists' mental health and mental health-related symptoms. Finally, to recommend specific measures to avoid consequent potential implications for dentists, dental students, and dental patients.

Keywords: Anxiety, COVID-19, Dentistry, Fear, Mental health, SARS-CoV-2

1. Introduction

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is an airborne virus that has caused the Coronavirus Disease 2019 (COVID-19) [1]. Like other respiratory diseases, COVID-19 is transmitted mainly by droplets and contact with infected people [2]. Therefore, many governments declared quarantine to contain the rapid spread of the SARS-CoV-2 [3] and specific measures were applied to limit viral transmission, including isolation, the use of respirators, and handwashing [4, 5].

In the face of this, the mental health of the general population was compromised. Strict isolation, loss of freedom, separation from family and loved ones, and working incapacity led to different people developing anxiety, fear, and depression [3]. Moreover, quarantine produced a general perception of job insecurity [6] and a serious concern about family and friends contagion [7].

From previous epidemics, it is known that health care workers (HCWs), have a higher probability of developing anxiety and depressive symptoms [8]. Nevertheless, little attention has been paid to the mental health and burnout that dentists may suffer [9–11]. During the lockdown, dental activities were limited to

treat only emergencies and urgent procedures and use strict biosecurity measures during dental procedures [12, 13]. Many routine dental practices were suspended because of cross-infection risk during dental care [14], affecting the economy of dentists and consequently their mental health [15–17]. Not to mention dental students and dental patients who had to suspend classes and dental treatments during lockdown [18, 19].

Thus, this chapter aims to review the impact of the COVID-19 pandemic on dentists' mental health and mental health-related symptoms. Finally, recommend specific measures to avoid consequent potential implications for dentists, dental students, and dental patients.

2. Mental health problems in other epidemics and diseases

In 2008, the World Health Organization (WHO) ranked major depression as the third leading cause of global disease burden, making it a significant health concern [20]. It has been reported that different diseases and infections can lead to an increased prevalence of mental health problems and substance use disorders, including infectious, neonatal, and non-communicable diseases such as HIV [21–23].

Isolation during disease management is believed to affect mental health, but the actual effects are still unknown [24]. Quarantine and isolation measures have not only occurred in this pandemic; they were also imposed in Canada and China during the SARS outbreak in 2003 and many African countries for the Ebola outbreak in 2014 [7].

Data on past epidemics have indicated that HCWs are at risk for anxiety and depressive symptoms in the same manner as during the COVID-19 pandemic. Concerning other coronavirus outbreaks, it has been reported that HCWs were related to a substantial psychiatric burden during and after them [25]. Moreover, it has been shown that quarantined people in hospitals could develop mental health symptoms [26]. Patients infected with MERS-CoV had a considerable effect on mental health during quarantine. Common symptoms related were depression, anxiety, impaired concentration and memory, and insomnia [25].

Although the SARS epidemic was contained rapidly, it had a high human cost. Many HCWs reported mental symptoms and posttraumatic morbidities [26].

It was found that having been quarantined during the SARS outbreak and previous experience of other traumatic events increased the probability of having elevated levels of depressive symptoms three years later [27]. However, some authors do not consider the SARS epidemic as a mental health catastrophe; follow-up studies reported that these symptoms could be associated with the stress of daily life rather than with the SARS crisis [28–30].

3. Risk factors and possible stressors

There are different risk factors of Mental Health problems, such as previous history of depression or anxiety, but the best known are female gender and current medical history [8]. Risk factors for experiencing anxiety and anger after MERS infection included isolation, inadequate supplies (food, shelter, clothing), history of psychiatric illness, and financial loss [24]. Similarly, it has been shown that psychiatric impact during the COVID-19 pandemic may be more significant in females. Anxiety and depressive disorders were higher in women than in men during the COVID-19 pandemic, indicating that female gender has been identified as the strongest predictor of posttraumatic stress disorder symptoms after pandemics [31–33].

Additionally, the COVID-19 pandemic adds other essential aspects such as isolation and quarantine that produce a psychological impact on individuals [7].

Likewise, dentists, dental staff, and dental patients have faced specific problems. For instance, Dentists have also changed their priorities. Their schedules may not be sufficient to handle all emergencies and emergencies during quarantine because of the need to add time for strict disinfection [3]. At the same time, there is great difficulty in acquiring supplies needed for dental care. Many governments did not have clear guidelines in place at the onset of the pandemic leading to work disruption and economic losses [7].

4. COVID-19 consequences in healthcare workers

Mental health symptoms such as stress, depression, anxiety, and sleep problems have been reported during the COVID-19 pandemic [34]. Likewise, exacerbation of fear, depression, and anxiety [3].

Studies have reported posttraumatic stress symptoms between HCW during the pandemic [8] and one month after the COVID-19 outbreak [35].

HCW may experience evasion by their family or friends due to stigma or fear of contracting the disease from them [36]. Isolation, reduced social relations, and loneliness are well-recognized risk factors for several mental disorders, including major depression and schizophrenia [3]. During quarantine, the medical staff was more likely to develop fatigue, anxiety, insomnia, irritability, poor concentration, and resistance to work, resulting in decreased work performance [7].

Vindegaard et al. reported a high level of posttraumatic stress symptoms and found a 29% prevalence of depression among 57 newly recovered COVID-19 patients and 9.8% in quarantined participants (9.8%) [8]. Panagioti et al. [37] reported that physicians with burnout are twice as likely to be involved in patient safety incidents, provide inadequate patient care, and three times more likely to receive a low patient satisfaction rating. In the same way, a study revealed that quarantined staff in a hospital show signs of acute stress disorder nine days after the end of isolation, indicating that being quarantined in a hospital could be a predictor of posttraumatic stress [7].

On the other hand, the Covid-19 pandemic has affected health systems around the world [11]. Many institutions have to deal with the limited availability of personal protective equipment (PPE) in some facilities and the increasing need for trained medical personnel [38]. Besides, it was difficult to import medical equipment and supplies at the peak of the COVID-19 crisis due to government restrictions prohibiting their medical industry from selling outside their own countries [39].

5. COVID-19 consequences in dentists and dental staff

As in other HCWs, the mental health of dental workers could also be affected by this pandemic context. The SARS-CoV-2 pandemic has led to several mental health issues among doctors and nurses, and dentists are no exception due to the nature of their work [40]. Anxiety and mental disorders due to COVID-19 in dentists have been reported. The prevalence of symptoms related to anxiety was 71%, 60% with depression, and stress was 92% [41, 42].

Isolation and social distancing could have a detrimental impact on the mental health of patients and dental workers. It has been reported that the psychosocial consequences of the COVID-19 pandemic may be particularly severe for health professionals with a higher level of exposure [3]. An association was found between

higher fear of COVID-19, job insecurity, and depressive symptoms [6]. It was also found that dentists working in the private sector presented fewer psychological symptoms than the independent ones [42].

Khader et al. [43] reported that 71.7% of 368 interviewed dentists perceived COVID-19 as a moderately dangerous disease, and 17.7% like very dangerous. A recent study about happiness among dentists highlighted that inadequate stress management and not achieving professional satisfaction could influence the quality of delivered treatment and patients compliance, revealing the urgency among dentists to be trained in this matter [44].

Managers and team leaders may experience extra pressure concerning their roles and responsibilities [36]. Understanding the risks associated with SARS-CoV-2 transmission during dental treatment and assessing strategies for its prevention in dental offices is critical to ensure patient safety and access to oral health care [45].

The schedule of health professionals could be challenging. Time schedules could be insufficient to handle all treatments, adding the disinfection time as efficiently as before [3]. Not to mention the stress and difficulty in needed supply acquisition and the inadequate and insufficient information from governments and public health authorities on what measures to take to combat the pandemic [7].

Dentistry could be a hazardous and stressful profession [46–48]. It is well known to be associated with health concerns, including psychological stress, burnout, physical tiredness, pressure, and emotional exhaustion, directly affecting general and mental health, leading to poor work performance [49, 50]. In addition, HCW and dentists had to wear a mask for long periods throughout the pandemic with concerns about its correct use [51]. The adverse effects of this pandemic appear to be long-lasting [7]. Clinics and dental practices need to be modified to guarantee care and a safe environment [3].

6. Dental patient's concern about dental treatment in the context of COVID-19 pandemic

A significant association was found between patients' feelings about COVID-19 infection and attendance at their dental appointments. Patients, especially women, reported feeling anxious and worried during their treatments and others about prolonged orthodontic treatments [19, 52]. Similarly, patients who were going to undergo oral surgeries presented a higher increase in anxiety than before the pandemic [53]. Among the main concerns of the patients was the risk of infection and possible transmission to their families. On the other hand, worsening their oral health was also reported, and others considered that treatment outcomes could be affected [52, 54].

In the same way, there is concern about the dental treatment of children. Thirty-three percent of parents described the dental office as more dangerous than public areas. The majority of surveyed parents felt that their children could become infected more easily during dental treatment [55].

Peloso et al. [52] recommended that dentists should use technology for patient counseling about appointments and treatment to decrease their anxiety. Finally, it is necessary to share consistent information about biosafety protocols during dental care to reduce fear and anxiety in patients [56].

7. COVID-19 pandemic and the mental health of dental students

Numerous studies have informed that university students are at high risk for mental health problems that are exacerbated by the COVID-19 pandemic [57]. Ma et al. [58]

reported that of 746,217 students surveyed, 45% presented mental health problems, 34.9% signs of acute stress, 21.1% depression, and 11% anxiety. The main factors that could influence the mental health of university students are social isolation, inability to meet with friends, concern about personal health, fear of someone in the family becoming infected, and lack of certainty about the future [59, 60]. In addition, 83% of the students showed anxiety and concern about losing their manual dexterity, and others reported fear of the new way examination process [60].

Again, an association was found with female gender and depressive symptoms [60, 61] and with having infected family members or friends [58].

In terms of clinical education, students reported that they had to adapt to changes and didactic learning; others indicated that at least one of their courses moved to virtual mode. Although 51.8% perceived some difficulties during virtual education, 48.3% perceived that faculty were prepared for the online transition [62]. Some students reported feeling stress about the risk of infection and returning to clinical classes and patient contact [63].

In this matter, faculty support is needed to help in the transition and concerns about academic progress and stress levels [62].

8. Recommendations and considerations to improve mental health

- First, if you notice any changes that concern you regarding your mental health, seek professional help [3]
- It is essential to implement and conduct psychological workshops to reinforce the moral of dentists and the correct instruction in the use of personal protective equipment [41].
- Make time to communicate frequently with family and friends; whenever you can opt for video chat to see people's expressions [36].
- If you do not have a social group, contact with a trained person such as a social worker or a psychologist [5].
- It is healthy to focus on the thought that we voluntarily stay home to care for ourselves and others and not see it as mandatory [7].
- If you have any questions about people infected with COVID, inform yourself and avoid prejudice and stigmatization. Make an effort to show empathy [36].
- Limit stressful sources or news about COVID-19 to minimize the access to exacerbated information. Look for objective data in trusted sites [3, 36].
- Attempts to use technology to reduce anxiety levels by counseling patients about their treatment, appointments, and oral health [52].
- Concerning patients, an important aspect is to inform them about the safety of dental office visits. Communication about biosafety is a crucial aspect of reducing fear and anxiety in patients [56]. It is also essential to minimize care time and reduce the intervals between patient appointments [19].
- Concerning dental students, it is essential to provide psychological and social help to students, especially those with associated risk factors [58].

- Institutions and universities should take preventive measures to support students and manage factors that could influence their mental health and crisis management [61, 64].
- Dental schools must adapt quickly and customize changes primarily for those students who may not practice their clinical or laboratory skills [60].
- Although most dentists are knowledgeable and aware of COVID-19, specific gaps require more efficient training programs, proper guidelines, and improved treatment protocols [65]. Authorities should support dentists if they have to stop their professional activities without prior planning by providing them with appropriate policies and monetary support [40].

9. Conclusions

As HCW and human beings, dental workers are coping with the consequences and effects of this pandemic. The pandemic will be over, but its impact on mental health and well-being will remain for a long time. Our call is for our colleagues to take measures to decrease those adverse effects in mental health and seek professional help in the case is needed. In addition, within our healthcare workers' position, spread this knowledge and refer any patient who could need psychological or psychiatric attention. Mental health problems after release from isolation could be prevented by providing mental health support to vulnerable individuals and providing accurate information and appropriate supplies, including food, clothing, and shelter.

Acknowledgements

The authors want to thank the Periociencia research team for comments to improve this paper.

Conflict of interest


The authors declare no conflict of interest.

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